

## The comparison of social networks of patients with unipolar and bipolar affective disorder

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### Summary

**Aim.** The purpose of the research was to analyse the structure of social networks as well as types and sources of support received by patients with unipolar and bipolar disease.

**Material and methods.** Assessment was made according to Bizoń's method and Cohen's ISEL.

**Results.** It has been shown that the functioning of social networks of patients diagnosed as having unipolar affective disorders differs from the ones with bipolar disease. Patients with unipolar disorder do not mention many people of their environment as significant or providing support. They often restrict their interactions to family members, which is the group of people from which they obtain most support. In both groups, all supportive functions often lie with one person. Patients with bipolar disorder find it easier to make acquaintances. When compared to the group of bipolar patients, patients with unipolar disease receive less support and the emotional support is the most deficient.

**Conclusions.** It seems that a combined therapy of affective disorders should include not only pharmacotherapy and various kinds of psychotherapy but also ought to take into consideration, the structure and functioning of patients' social networks. Stabilizing supportive relations in different aspects of life should be one of the aims in the therapy both in hospitals and in outpatients' clinics.

depressive disorder / bipolar disorder / social support

### INTRODUCTION

Affective diseases are chronic illnesses which cause a lot of suffering in patients and their families. According to the figures released by WHO, by 2020 depressive disorders will have brought about as devastating effects on human life, as ischaemic heart disease. The WHO 1999 report places this type of disorder on the top of the list of population diseases in the USA; in the other world regions they take the fifth place and only

in Africa, the eleventh. This data confirms that the search for effective treatment of mood disorders should be one of the top priorities of contemporary medicine [1].

At the end of the 20<sup>th</sup> century, in the decade now known as the "decade of brain research" a few discoveries have been made which have finally confirmed the purposefulness of all-embracing treatment. Cartesian dualism that introduced a distinction between endogenic and psychogenic diseases, contrasting pharmacotherapy with psychotherapy seemed outdated and no longer made any sense. One of the theses for which Eric Kandel received his Nobel Prize stated that "as a result of psychological learning processes, a modification of synaptic connections takes place in the central nervous system" [2]. In view of the discoveries of the

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last few years, offering a wide choice of therapeutic methods to patients seemed even more justifiable than in the old days when Sigmund Freud claimed that “speech therapy can transform nervous connections”.

One of the areas of main interest in the clinical treatment of affective diseases are patients' social contacts, which is based on the assumption that naturally every human is a social creature in need of other people for a satisfying life and personal development; in need of their presence and help. Relationships with other people are one of the crucial elements that decide of personal quality of life from the moment of our birth to the time we die. Patients, who are asked to prioritize the factors that affect their quality of life, often mention social support even before mental health, financial situation and their independence [3].

It has to be emphasized, however, that having an extensive social network is not a simple yet wonderful way of protecting yourself from the occurrence and reoccurrence of affective disorders, even if the feeling of having support in one's environment is one of the elements which make it easier to achieve total remission. In this type of chronic illness, being involved in important, intimate relationships may in itself constitute motivation to fight for recovery and mobilize all resources that our body can muster (“I have someone to live for”), make it easier to follow doctor's orders which are not always easy to follow, accept the regimes of therapy or even the fact that that one is ill. Social network is not only a source of support; it can also become a stage of conflict, a reason for excessive demands and expectations. Still, it seems obvious that all of us need the positive aspects of its existence, independently of the related dangers of being exposed to sadness, anger or suffering [4].

The aim of this study was to analyse the structure of social networks, the types and sources of support received by patients with diagnosed affective illnesses.

## MATERIAL AND METHODS

Our research involved patients in the outpatient care of the Adult Psychiatry Clinic of the University Hospital. They were divided into

two groups of 40, according to the diagnosis of recurring depressive disorders (unipolar affective disorder – UAD) and bipolar affective disorder (BAD). The illnesses were diagnosed with the use of ICD-10 criteria and, for the recurring depressive disorders, of the criterion proposed by Perris (at least three depressive phases confirmed without any manic or hypomanic phases) [5]. The remission was diagnosed by clinical examination and diagnostic tests, such as Hamilton's Depression Scale, Beck's Depression Scale, Young's Mania Scale. Patient's social networks were evaluated on the basis of Bizoń's Social Environment Questionnaire and Cohen's Social Support Scale.

Bizoń's Social Environment Questionnaire allows for both qualitative and quantitative characteristics of social networks. The evaluation is carried out based on numerous parameters, such as – amongst others – [6, 7, 8, 9] the range of network (the size of one's social environment i.e. the number of people with whom one keeps in touch), the size of non-family network (the part of the social environment which is not related to the studied patient), the age of network (the duration of acquaintances), the activity of the support system (frequency and duration of personal meetings, making telephone contacts and undertaking correspondence), size of the support system (number of sources of support – number of persons in the patient's environment who fulfil at least one supporting function in his or her life), type of support system (distribution of support functions among network members), localization of support (drawing most support from family or non-family sources), support level parameter (takes into account a number of network functions fulfilled in a given system and the degree in which a function can be replaced by other sources of support and differences in significance of individual functions).

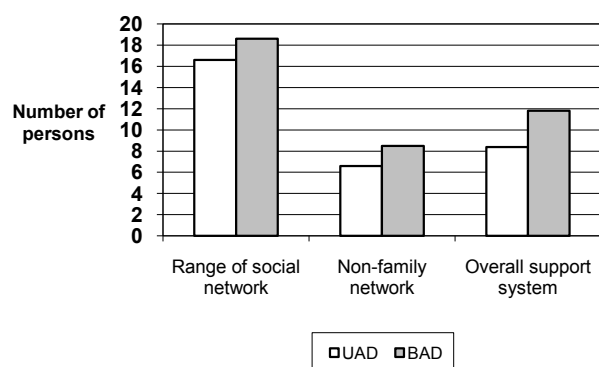
Cohen's Social Support scale identifies various types of support and is complementary to Bizoń's Questionnaire. Cohen's support categories are close to those distinguished by Helena Sęk [4]:

- Emotional support – leads to calming down one's emotions, acting out bad emotions, raising self-esteem and confidence
- Informational support – helps to understand one's position in life

- Instrumental support – provides possibilities of acting together, also in solving problems
- Tangible support – material help and physical care (feeding, getting clothed, washing)

## RESULTS

In our evaluation of the structure and functioning of patients' social networks, in the first instance attention has been paid to the results regarding the range of social networks (size of social environment), the size of non-family networks and the overall support system. These results take into account the total number of people identified by the interviewed patients. In the group of patients with Unipolar Affective Disorder (UAD) the range of networks proved to be smaller, as were the non-family networks and the overall support system. The last two parameters differentiated the groups in a statistically relevant way. The difference in size of the social environment became statistically relevant once the division was made into small, medium and large systems (Fig. 1).



**Figure 1.** Range of social network, size of non-family network and size of overall support system ( $p < 0.05$  for the range of non-family network and size of the overall support system)

Next it was the so-called network activity which has been analysed. This parameter involves the frequency of personal contacts, duration of meetings, frequency of telephone conversations and making contact in correspondence. All patients met with most of the people belonging to their social network at least once a month but less frequently than once a week). The most infrequently reported were daily meetings. With most of the network members, most of our inter-

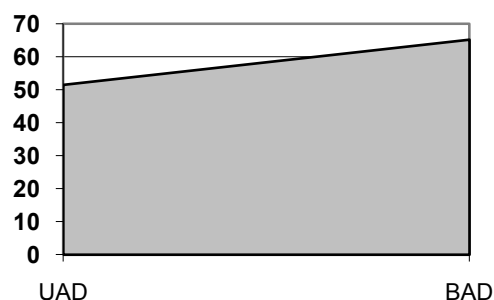
viewees spoke on the phone less frequently than once a month and the daily contacts were also among the rarest. Patients with Bipolar Affective Disorder (BAD) spoke on the phone to the members of their network even less frequently, however they wrote letters more often than the UAD patients (the difference was statistically irrelevant). Whereas the UAD patients spent less time on any one meeting (one or two hours), the BAD patients spent over 5 hours with a member of their network at each meetings. Short meetings, lasting just a few minutes, were least frequent in both groups. The so-called age of the network was also compared in the research. In case of the patients with BAD diagnosis it was the intermediate systems i.e. those in which most of the relationships were shorter than 10 years and longer than 1 year were reported more frequently than in case of the UAD patients. The difference was statistically relevant. Still in both groups it was an old system that prevailed (i.e. a system in which most of the relationships were longer than 10 years), especially when not only the non-family network was considered but also the family members (Tab. 1).

**Table 1.** Network activity and the age of non-family network (parameters p)

Personal meetings ©	0.211	Personal meetings ®	0.144
Telephone conversations ©	0.039	Telephone conversations ®	0.548
Duration of personal meetings ©	0.657	Duration of personal meetings ®	0.133
Correspondence	0.171	Age of non-family networks	0.003

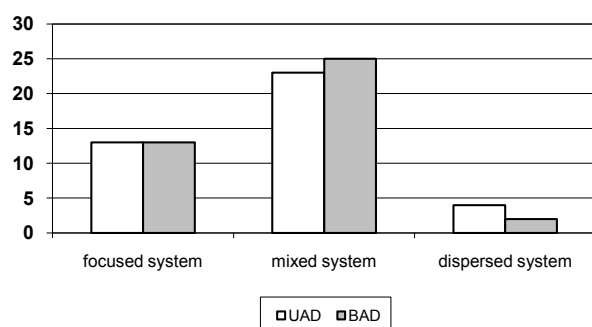
© by the most frequent ® by the least frequent

We have also considered the percentage of people in the network which was used as sources of support. The analysis took into account all of those who fulfil at least one of the supporting functions, regardless of the total number of functions they fulfil. The UAD patients used fewer people as the source of their support (49.5-66%) and the reported difference was statistically relevant. (Fig. 2)



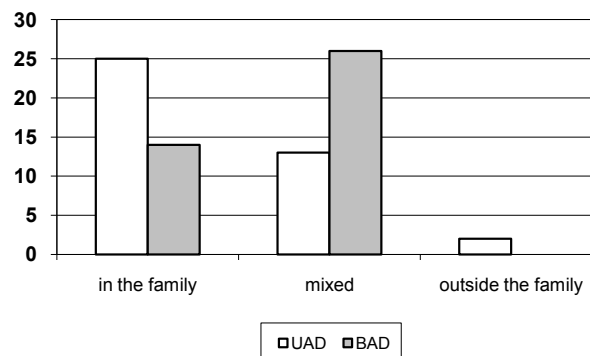
**Figure 2.** Use of network members as source of support (Y represents percentage values) ( $p < 0.05$ )

In the next stage of the research, the types of social networks were analysed. In both groups mixed systems prevailed, and the focused systems in which most of the network functions are focused on one or two people (in case of large systems) were equally frequent in both. In both groups, the dispersed systems in which the differences between the number of supporting roles played by each member of the group did not exceed two, were rather rare (Fig. 3).



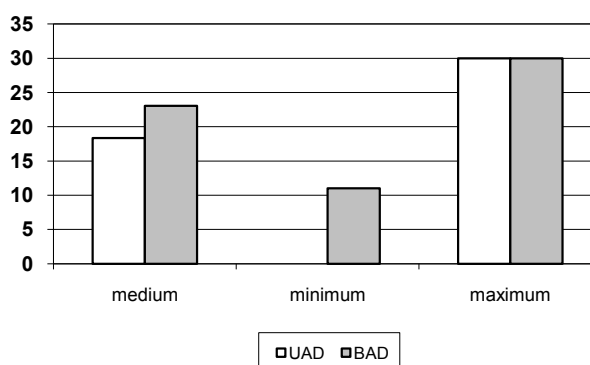
**Figure 3.** Type of support system (statistically irrelevant differences) Y represents the number of interviewed patients with a system of a given type.

The so-called localization of support i.e. the source from which patients draw most support, has been also analysed. In the system localized in the family or outside of the family, this source provides over 75% of support. The systems which do not meet this criterion are defined as mixed. Patients with BAD diagnosis operated mostly in the mixed systems whereas the UAD patients drew most of their support from their family members. The systems in which most of the supporting functions originate outside of the family were few and far between (UAD patients) or did not occur at all (BAD patients) (Fig. 4).



**Figure 4.** Localization of support system ( $p < 0.009$ ). Y represents the number of interviewed patients with the system of a given type.

In our attempt to evaluate the sources and level of received support, the support level parameter was also an important element. The questionnaire's authors regard it to be a global measure of supporting properties of a support system. It takes into the account a number of functions of the network fulfilled in a given system, the degree to which a given function can be replaced by other sources, and it is also sensitive to the differences in significance of each function. The value of the support level parameter is a sum of plus and minus points and it falls between “-” 18 and “+” 30. In the groups that we have researched there were no minus values in the parameter of support level. The lowest noted parameter was 0 and it was observed in one patient with the UAD diagnosis. The parameters calculated for UAD patients were in a statistically relevant way different from those of the BAD patients (Fig. 5).

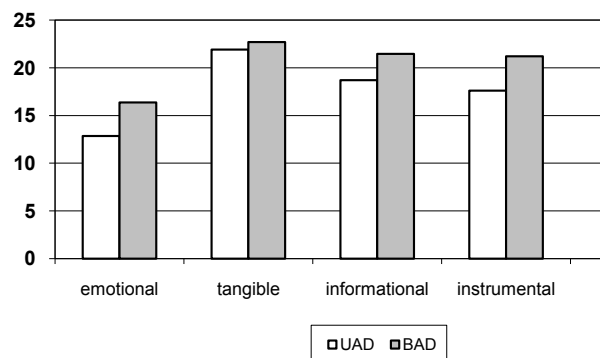


**Figure 5.** Support level parameter ( $p = 0.009$ )

We also analysed the data obtained with the use of Cohen's Social Support Scale, regarding the level of different types of support received by our patients. The UAD patients received less



emotional, tangible, informational and instrumental support than the BAD patients. However, it was only the difference regarding the emotional support that was noted as statistically relevant. (Fig. 6).



**Figure 6.** Types of support ( $p=0.02$  for emotional support, other differences were statistically irrelevant)

## DISCUSSION

The study presented in this paper was aimed at investigating the structure and functioning of social networks of patients with diagnosed affective disorders. For better illustration of data obtained in our study, our discussion of research results included a survey of literature available on the social networks of patients with recognized mental disorders.

In our division of social networks, with regards to their range, into small, medium and large networks, the small social circles were recognized more often in UAD patients in a statistically relevant way. The difference was irrelevant when the absolute number of people was compared – the UAD patient's networks usually involved 17 people and the BAD patients specified 19 people in their social network. The comparison of both groups also revealed a statistically relevant difference in size of non-family networks; patients with UAD mentioned on average 7 persons and patients with BAD 9.

For comparison purposes, we wish to quote Pattison's research of schizophrenic patients. Pattison's study revealed that his patients' social networks consisted on average of 8-12 people and the relationships were usually short lived. Patients often mentioned a nurse or other patients as people important to them yet omitted long-term friends or siblings from their so-

cial networks. The social networks of neurotics on average consisted of a dozen or so people, whereas healthy people include 25-40 persons in their social networks [10].

In comparison of our groups, a difference has been shown in the age of the non-family networks. In the group of UAD patients, the systems in which most acquaintances in the non-family network lasted less than 10 years and longer than a year prevailed. In the group of BAD patients, most of the relationships were longer than 10 years. The reasons for this difference might be various – perhaps the UAD patients' eagerness to enter new relationships is linked with their personality (syntony or extroversion) as opposed to BAD patients' characteristic introversion and sadness, or perhaps it is a result of a usually qualitatively better remission. As far as the network activity is concerned there were no differences observed between the two groups. Most people usually met at least once a month but no more often than once a week. Daily meetings were the least popular among our interviewees and daily telephone conversations were very rare. Patients with UAD reported essentially more frequent systems, in which most of the members telephoned one another less frequently than once a month. No statistically relevant differences were confirmed as far as the duration of time spent with friends was concerned, although a closer look at the data showed that the BAD patients spent more time with their friends. As far as the frequency of correspondence is concerned no differences were observed either. Between the two groups a statistically relevant difference was observed in the size of support system. Patients with UAD mentioned on average 8 whereas the BAD patients 12 persons from their social circle who fulfilled at least one supporting function out of all those mentioned by the authors of the questionnaire. Patients with BAD diagnosis used on average 66% out of the people they mentioned as important to them whereas in case of UAD patients the equivalent figure was 49.5% and the difference was statistically relevant.

Zbigniew Bizoń and Ewa Bernstein compared two groups in their own research, using the questionnaire presented here. One of the groups, so called Group S, comprised patients with the diagnosis of schizophrenia and the oth-

er group – called Group W – patients aged 62-85 with various psychiatric diagnoses (schizophrenia, bipolar affective disorder, and organic syndromes). The researchers concluded that the size of support system was in both groups between 4 and 6 persons, although in the Group W, the systems were on average larger by 2 persons. In Group S, 44 % of patients (24 persons) had small support systems (less than 3 persons). These patients used on average 47-54% of the people from their social network as the source of support [11]. These results cannot be compared directly with the data obtained in our research because neither the overall research conditions nor the selection criteria are comparable, but some common analysis can be attempted. In the group of patients with UAD diagnosis small support systems were only reported in 7.5% (3 persons) of the interviewees. In the group of patients with BAD diagnosis the same observation was made only in case of 5% (2 persons), which means that their support systems are larger. As far as the type of support system was concerned both UAD and BAD patients' social networks were dominated by the mixed type. The focused systems, which are least beneficial occurred equally frequently in both groups (32.5% in each group i.e. 26 persons altogether).

In Bizoń's and Bernstein's study, focused systems occurred in the case of 20% of all patients in group S and 39% in Group W. The authors emphasized a large prognostic relevance of this parameter in the aspect of a possible risk of breaking down of the entire support system [11]. It may be therefore concluded that a considerable number of patients, both with UAD and BAD diagnosis, were exposed to such risk. With regards to the localization of support, UAD patients' systems were dominated by the type where the majority of support was drawn from family members (at methodological criterion 75%), whereas patients with UAD diagnosis were more often embedded in mixed systems, characteristic of healthy people [9, 12]. The difference between the groups was statistically relevant.

For comparison purposes, let us look again at Bizoń's and Bernstein's study. They observed that the patients in the Group S (with the diagnosis of schizophrenia) more often than the patients from Group W (older than 62 with any psychiatric diagnosis) draw support from their

family members [11]. Similar results were obtained by Toldsdorf [see Axer 13] who concluded that social environment of patients with diagnosed schizophrenia is restricted and dominated by family. Seretti et al. observed a series of comparable distortions in non-family networks in UAD and BAD patients, whereas the latter also revealed additional increase of marital problems [14]. These authors quote the results of the research conducted by Bauwens et al. who, in their study of marital relationships with the use of the same questionnaire (SAS – Social Adjustment Scale), obtained exactly the opposite results i.e. worse for the UAD patients (even if the worse problems regarded only sexual relations), and of Weissman et al. whose study of the distortions of non-family networks revealed results similar to ours. Bauwens et al. stated that the UAD patients had statistically fewer acquaintances than the BAD patients. They also emphasized that there were only few studies comparing the two groups [15]. Coryell et al. [see Serretti 14] in their prospective research observed a considerable distortion in social functioning of patients with affective disorder diagnosis, also years after they reached full symptom remission. Based on this conclusion and also on the choice of patients for own research (clinical study and Halmilton Depression Scale), Seretti concluded that these distortions cannot be linked with residual symptoms of mood disorders [14]. Doi and Speer [see Beyer 16] observed that BAD patients receive less support from their families than the UAD patients.

Finally, in conclusion of our discussion of the results of our study obtained with the use of Bizoń's Questionnaire, let us have a closer look at the support level parameter, which the author of the questionnaire regards to be an overall measure of supporting properties of the system. As it was already mentioned, the questionnaire takes into account the number of network functions fulfilled in a system, the degree to which the function can be replaced by other sources, and the significance of each function. In the research presented here the average value of this parameter was 18.35 for the UAD patients and 23.05 for BAD patients with the minimum values of 0 and 11 respectively. The difference between the groups was statistically relevant.

Bizoń and Bernstein specified the average values of support level parameters for Group S being 5.2 and Group W – 10.2. These authors revealed as many as 23 cases of the minus value of the parameter, out of which 19 were observed in Group S (in 35% of the entire group). Such values always indicate very high deficits in the support system [11]. In full awareness of the fact that these results cannot be directly compared to the results of our study, it must be also said that the results obtained by our research look optimistic. They indicate that the social networks of patients with affective disorders fulfil their supporting functions much better than the networks of the groups studied by Bizoń and Bernstein.

The UAD patients in comparison to BAD patients received less emotional support at the statistically relevant level. The average test results were 12.85 and 16.37 respectively. The variations regarding the differences in the level of tangible, informational and instrumental support were not statistically relevant. This result calls for deeper analysis, especially when compared with the data obtained based on Bizoń's Social Environment Questionnaire. The first conclusion leads us to seeing UAD patients as being "lonely in a crowd". In spite of having extensive social networks they do not feel that the level of support they receive is satisfying at all. The BAD patients received only more statistically relevant emotional support, with the absolute figures being at their lowest. This only confirmed the highest deficit in this type of support in both groups rather than its sufficient level in the BAD group. Moreover the data directly emphasized that the UAD patients had a feeling of very low emotional support, if it is the only type of support which differentiates both group in a statistically relevant way. This observation is a little disturbing because emotional support is regarded by the patients to be most significant, having the greatest impact on the quality of their lives. Other analyses also indicate that it essentially affects the course of mental illness and any future prognosis of recovery.

The second reflection regards the fact that the authors of the questionnaire thought of the support level parameter as the global measure of the supporting properties of the system. The parameter, in case of the BAD patients, turned out to be insensitive to support deficits. Perhaps when

the patients answered the questions in Cohen's Questionnaire, which did not require identifying specific persons who fulfilled a given function, viewed their life differently in its aspect of received support than they did when answering the Bizoń's Questionnaire. By identifying specific persons, Bizoń's Questionnaire can be thought of as an attempt of objectivization of supporting properties of the system. However, the result of Cohen's test is very important because mental health is affected to a largest degree by the way a person perceives the support he or she receives and not by the way it looks through any attempt of its objectivization.

## CONCLUSIONS

- 1 Patients with unipolar affective disorder have smaller social and non-family networks than the patients with bipolar affective disorder.
- 2 Patients with bipolar affective disorder make new friends more often than patients with unipolar affective disorder.
- 3 The overall activity of patients' social networks is comparable; the systems are equally frequently focused on one person.
- 4 Patients with unipolar affective disorder have smaller support systems; they draw support more often from their family members and receive less support as measured by the support level parameter.

The chances of pharmacological treatment of affective disorders are increasingly better, and numerous new schools of therapy are developed to deal with the problem. Since the dualistic approach of the division into biological and psychological reasons for depression was left behind, patients have been offered a comprehensive, multidimensional treatment. New areas of possible interactions are sought for, and this is where the study of patients' social environment comes in. Information on patients' social networks may prove useful in planning both hospital and outpatient treatment. It is aimed at identifying the significant persons in the patient's life - all those who provide maximum support - but also at disclosing existing deficits, reorganizing or reconstructing patient's social network. An extensive psychiatric interview is the first

and probably the most important research instrument, although tests and questionnaires may provide valuable complementary information and further assistance. In view of the research results presented here, it seems most important to assist patients with bipolar affective disorder to use their existing sources of support more effectively and in the case of patients with unipolar affective disorder creating the new areas of support. Various clubs for patients and support groups may help patients to remove themselves from an exclusively family environment. It also seems important to create an environment for patients' families where they can share their difficulties of living with a mentally ill person. As it has been already mentioned, it is usually one person in the family who is used as a source of support. On the one hand these persons should be listened to, supported and secured in their role of support provider and in their significance in patient's process of recovery, and on the other, they should be relieved of their burden by finding alternative sources of support both in the patient's natural environment and in therapeutic circles.

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